Title: A System And Method Of Partitioning Software Components Of A Monolithic Component-based Application Program To Separate Graphical User Interface Elements
Applicant: Kramer
Serial No.: 09/849,160
Atty Docket No. CTX-032

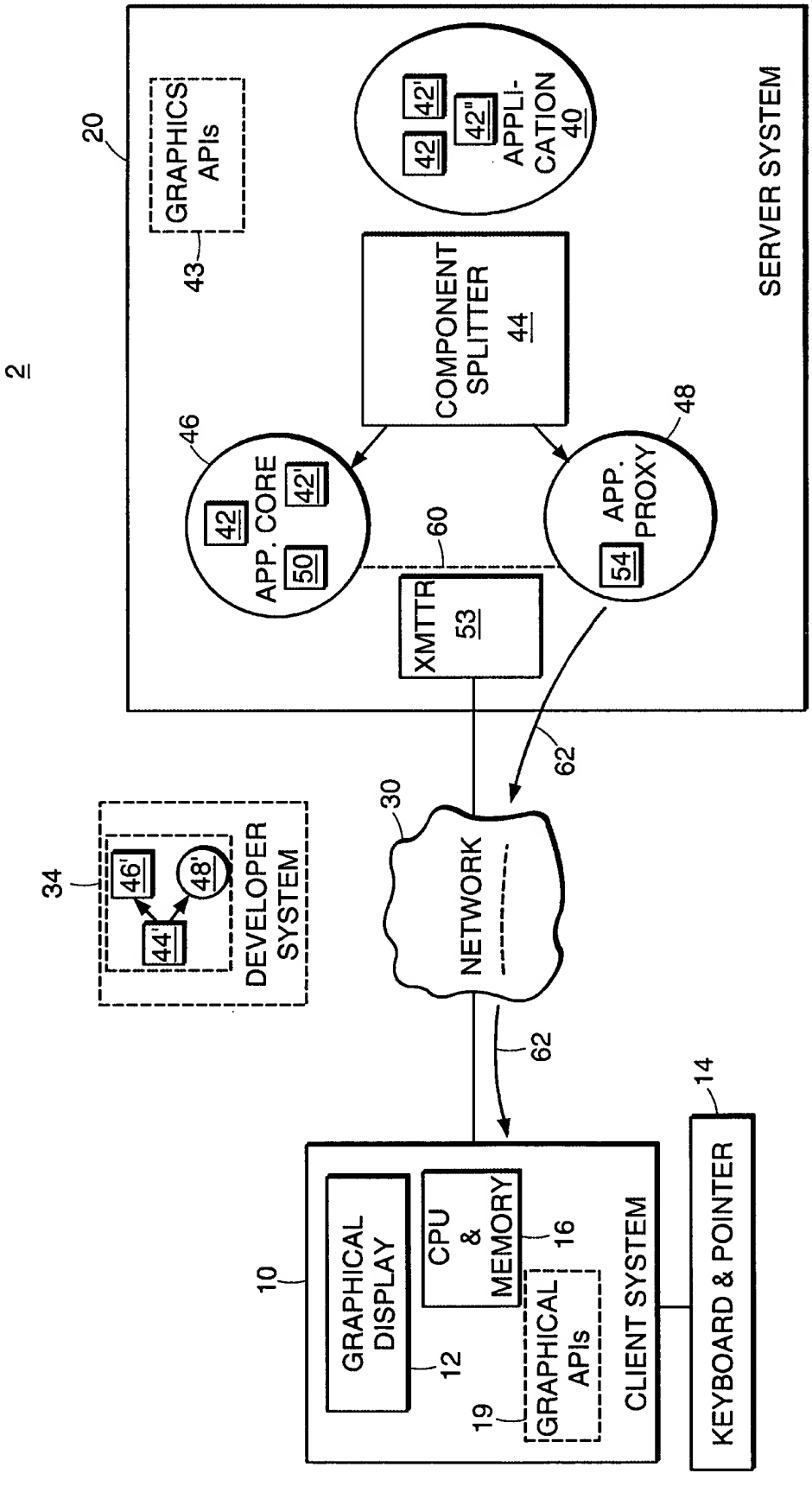

FIG. 1

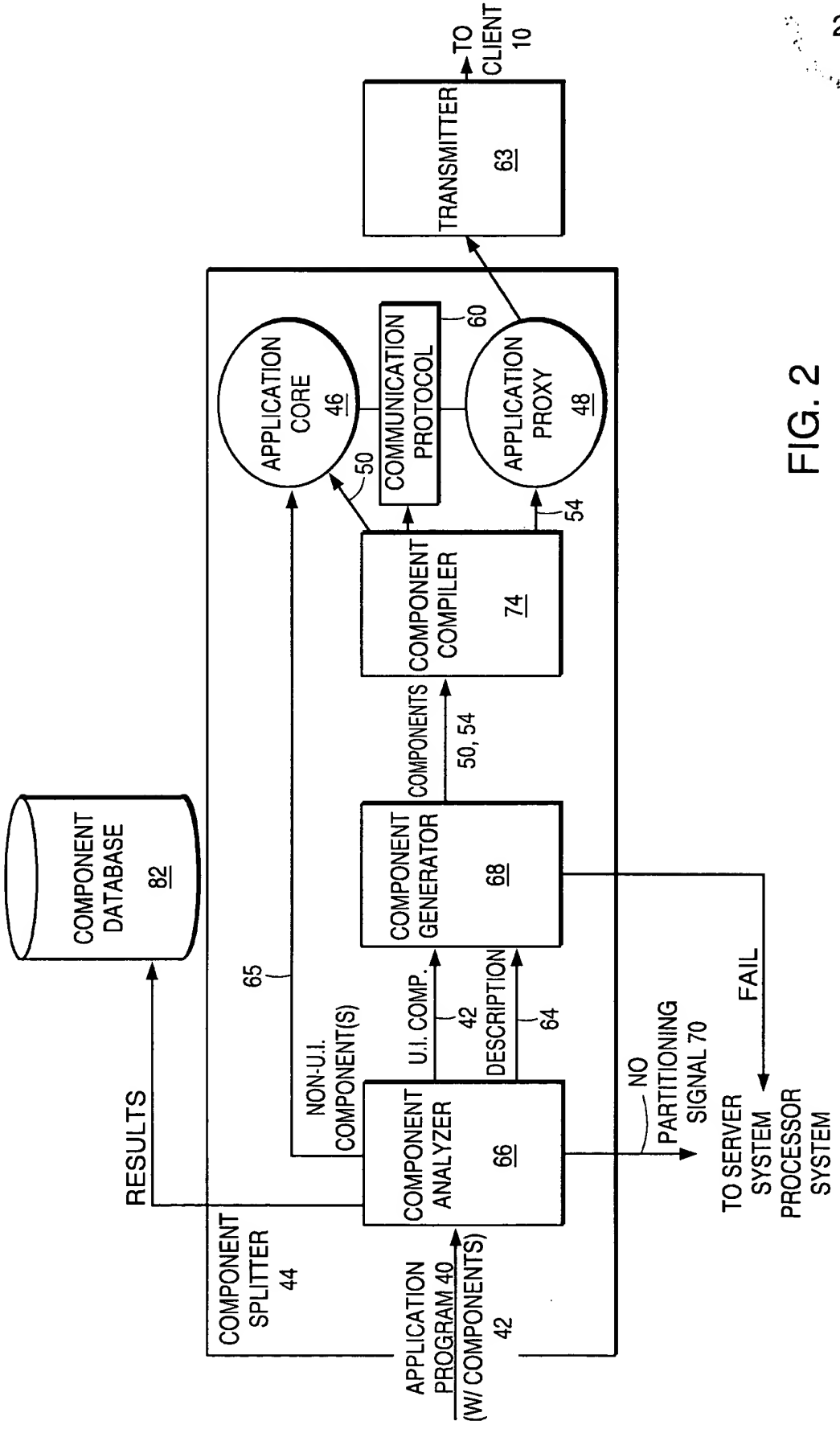
TO CLIENT 10
TRANSMITTER 63
APPLICATION CORE 46
COMMUNICATION PROTOCOL
60
APPLICATION PROXY 48
50
54
COMPONENT COMPILER 74
COMPONENTS 50, 54
COMPONENT DATABASE 82
COMPONENT GENERATOR 68
65
NON-U.I. COMPONENT(S)
U.I. COMP. 42
DESCRIPTION 64
RESULTS
COMPONENT ANALYZER 66
NO PARTITIONING SIGNAL 70
FAIL
TO SERVER SYSTEM PROCESSOR SYSTEM
COMPONENT SPLITTER 44
APPLICATION PROGRAM 40 (W/ COMPONENTS) 42

FIG. 2

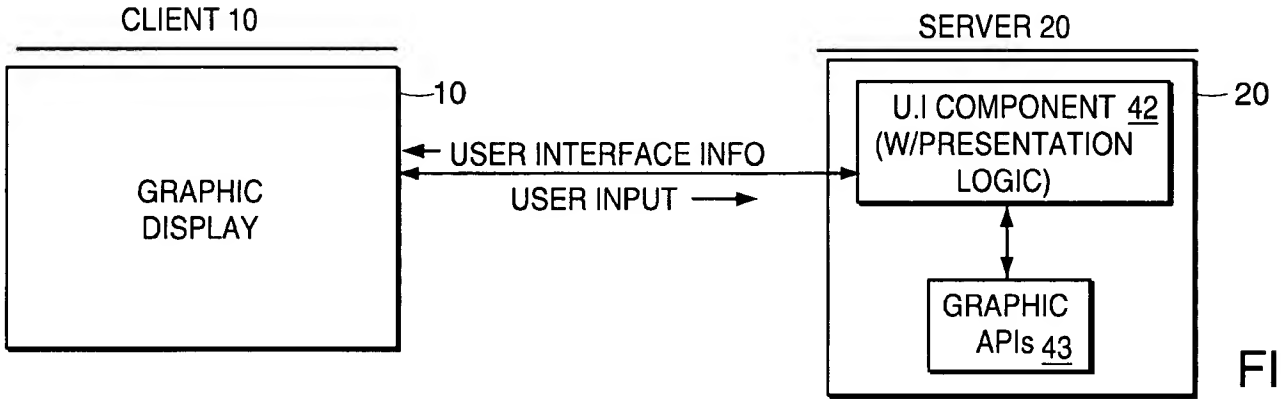

FIG. 3A
(PRESENTATION SERVICES PROTOCOL)

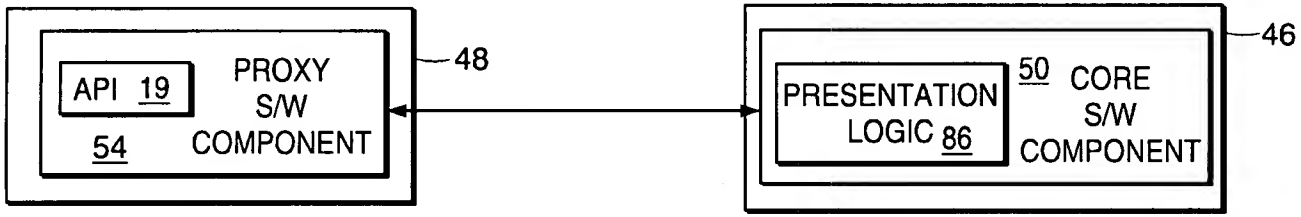

FIG. 3B
(OBJECT PROTOCOL)

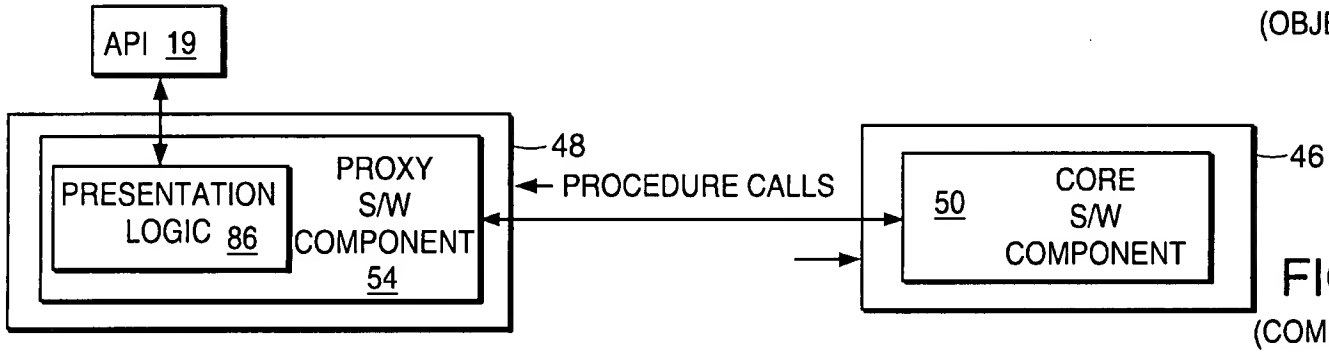

FIG. 3C
(COMPONENT PROTOCOL)

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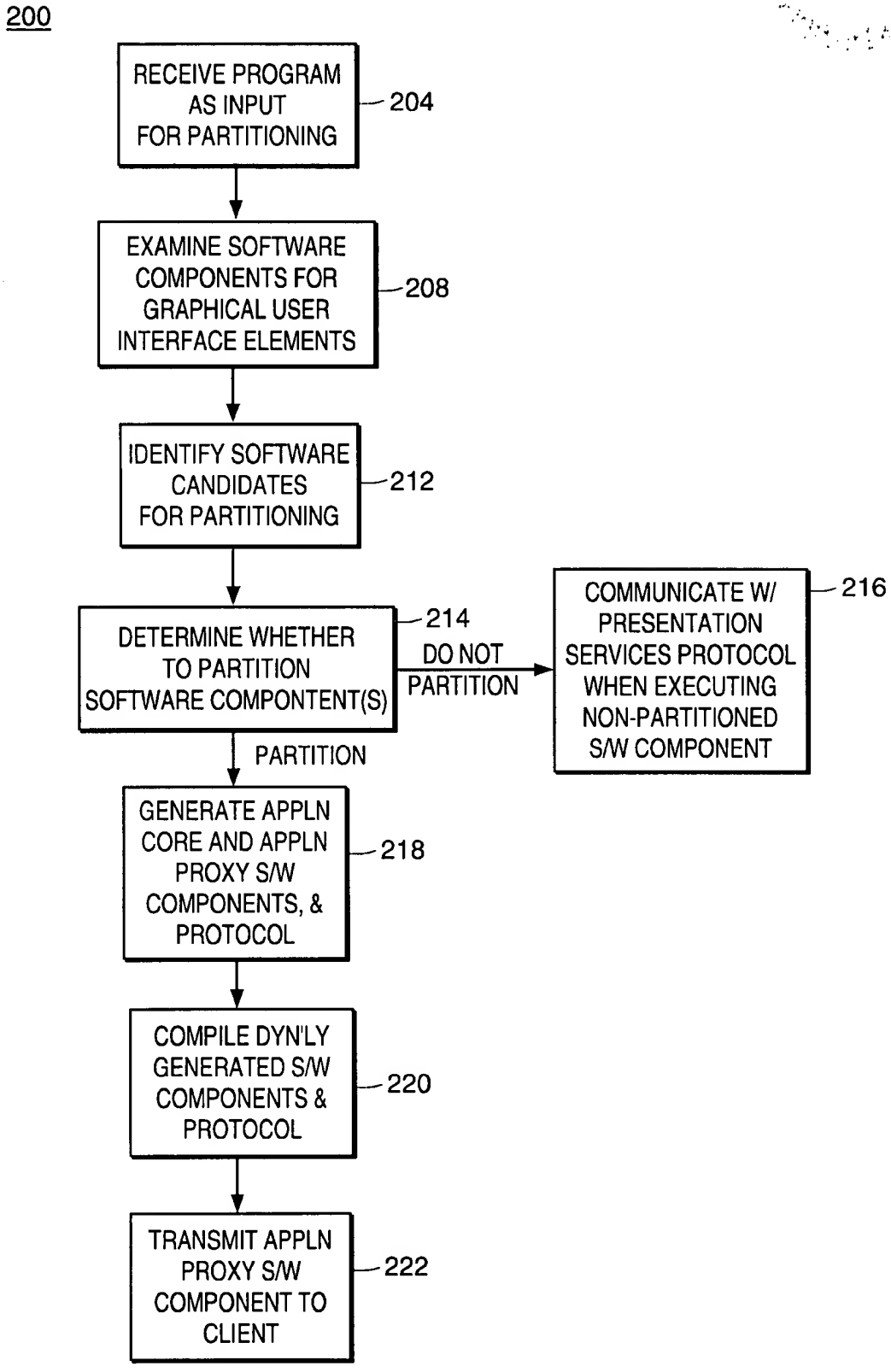
200
RECEIVE PROGRAM AS INPUT FOR PARTITIONING
204
EXAMINE SOFTWARE COMPONENTS FOR GRAPHICAL USER INTERFACE ELEMENTS
208
IDENTIFY SOFTWARE CANDIDATES FOR PARTITIONING
212
DETERMINE WHETHER TO PARTITION SOFTWARE COMPONTENT(S)
214
DO NOT PARTITION
COMMUNICATE W/ PRESENTATION SERVICES PROTOCOL WHEN EXECUTING NON-PARTITIONED S/W COMPONENT
216
PARTITION
GENERATE APPLN CORE AND APPLN PROXY S/W COMPONENTS, & PROTOCOL
218
COMPILE DYN'LY GENERATED S/W COMPONENTS & PROTOCOL
220
TRANSMIT APPLN PROXY S/W COMPONENT TO CLIENT
222

FIG. 4

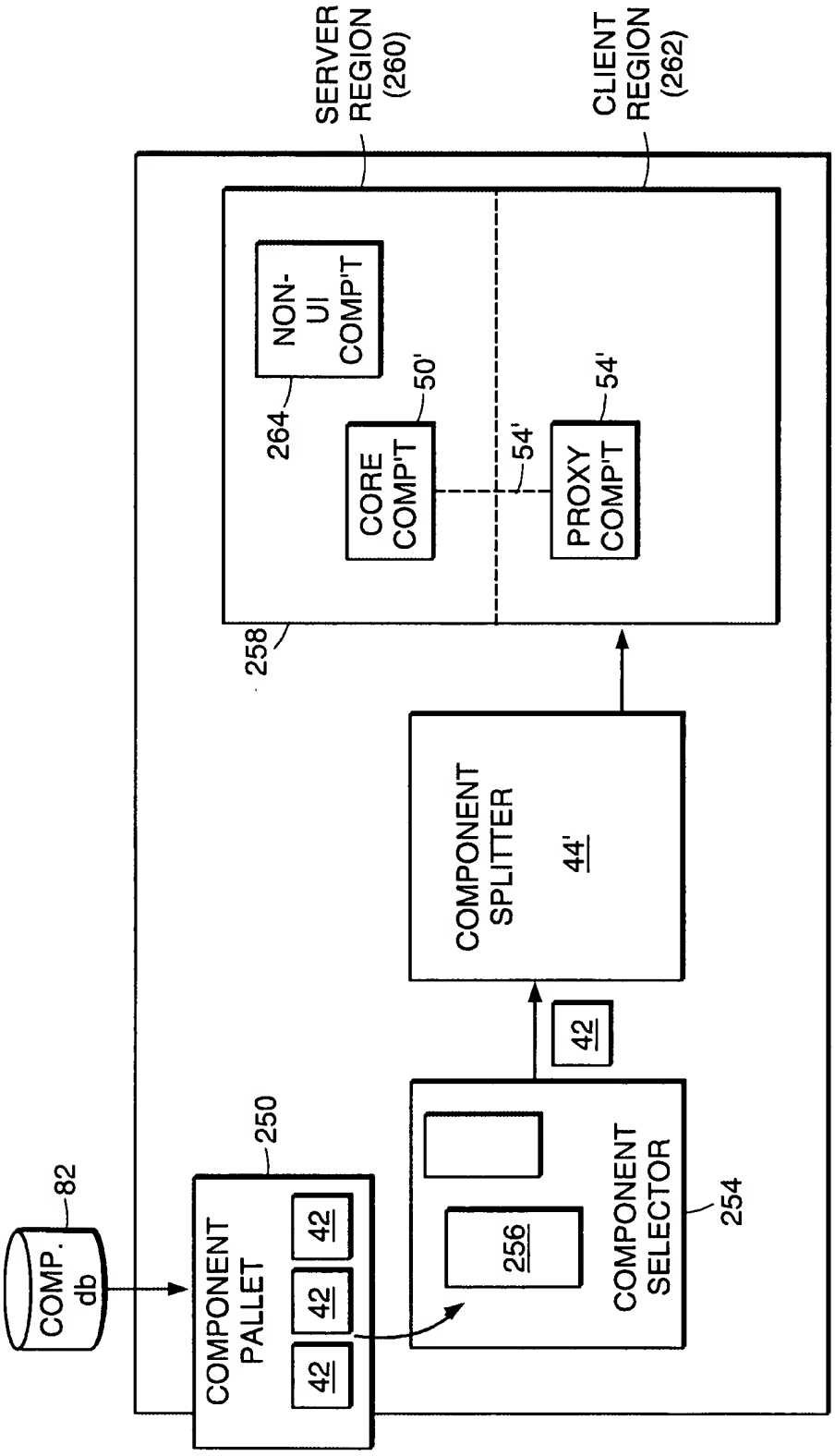
SERVER REGION (260)
CLIENT REGION (262)
NON-UI COMP'T
264
CORE COMP'T
50'
54'
PROXY COMP'T
54'
258
COMPONENT SPLITTER
44'
42
COMPONENT SELECTOR
254
256
250
COMPONENT PALLET
42
42
42
82
COMP. db

FIG. 5

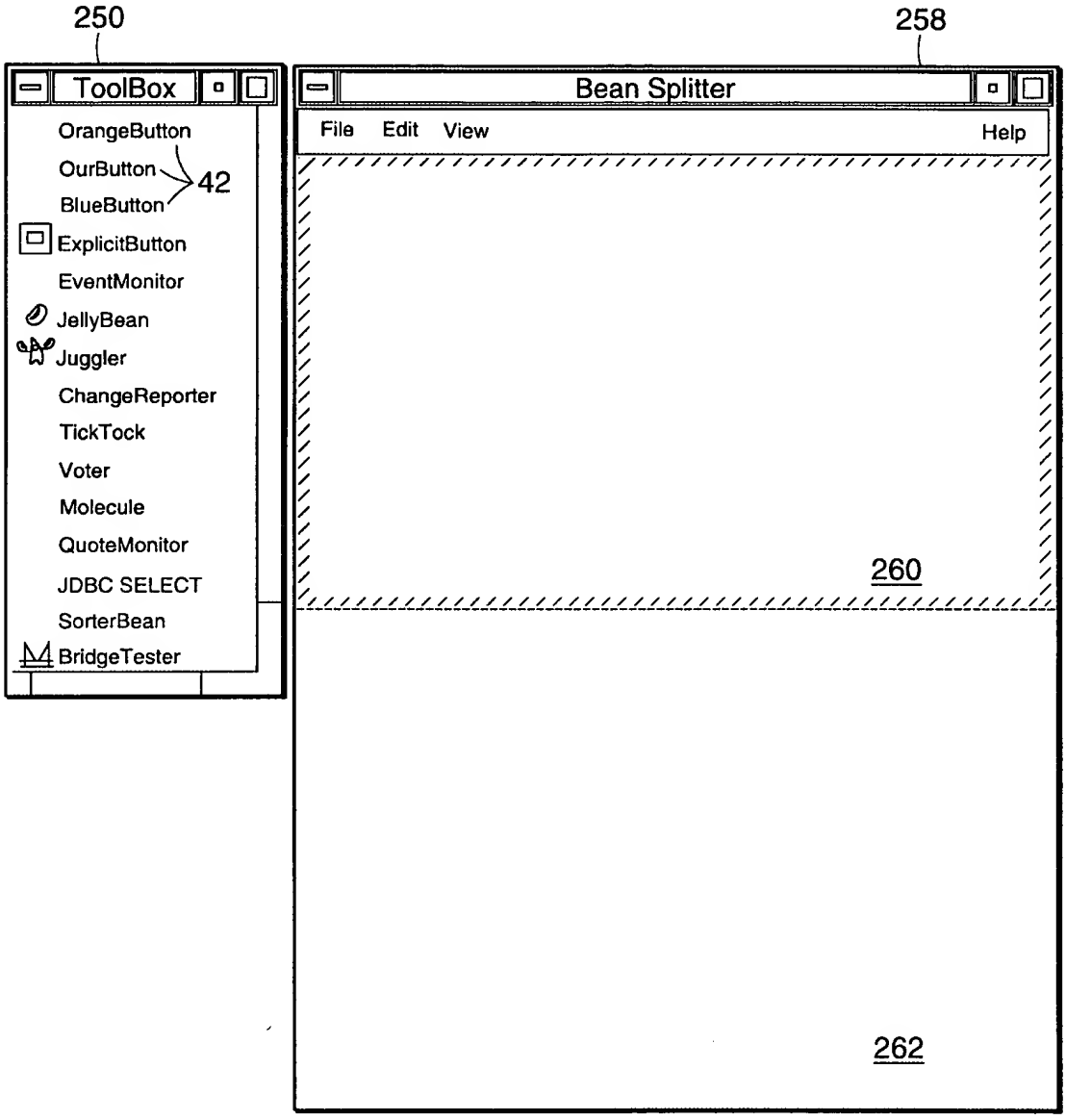
250
258
ToolBox
OrangeButton
OurButton
BlueButton
42
ExplicitButton
EventMonitor
JellyBean
Juggler
ChangeReporter
TickTock
Voter
Molecule
QuoteMonitor
JDBC SELECT
SorterBean
BridgeTester
Bean Splitter
File
Edit
View
Help
260
262

FIG. 6A

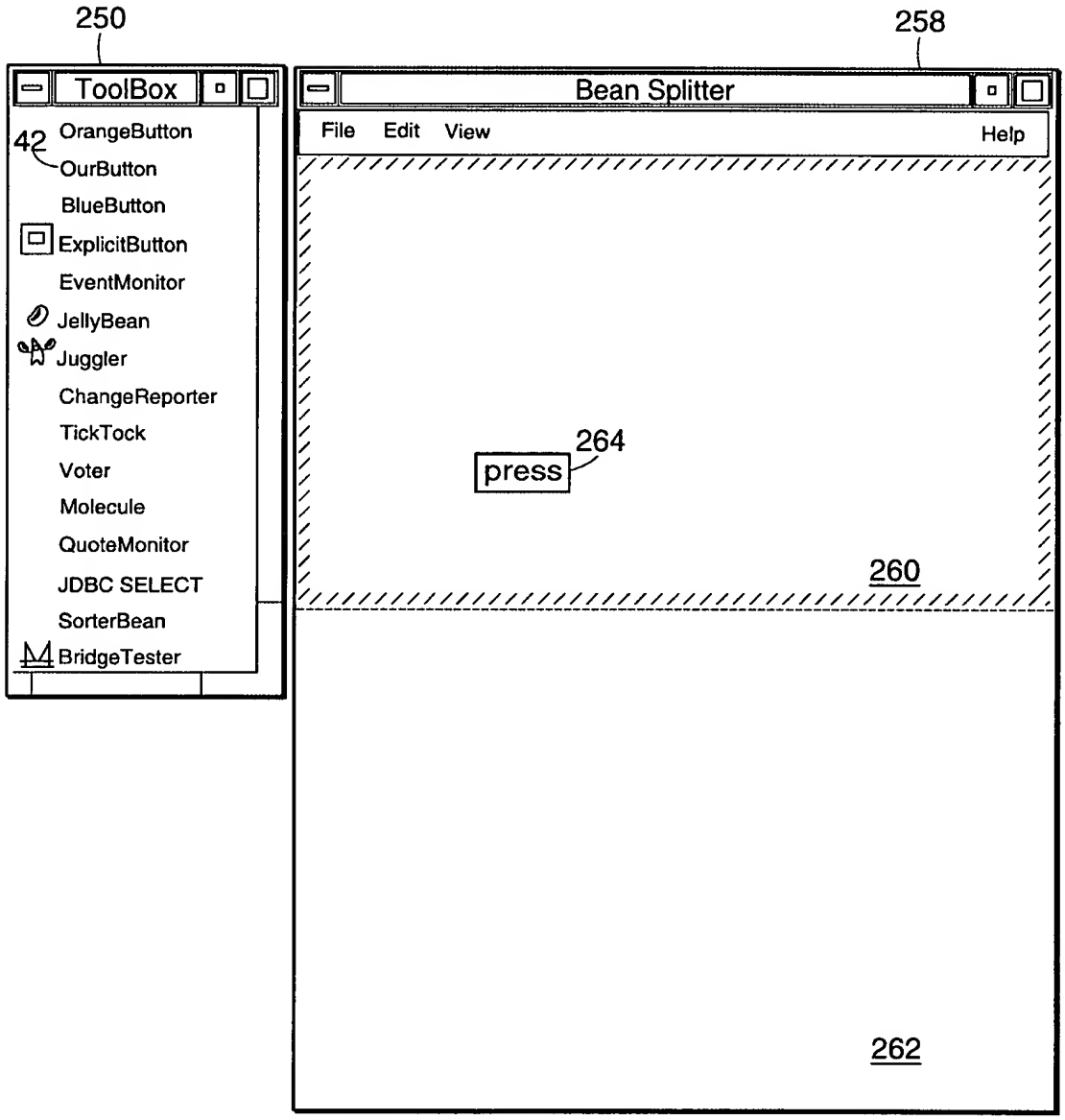
250
258
ToolBox
Bean Splitter
File
Edit
View
Help
42
OrangeButton
OurButton
BlueButton
ExplicitButton
EventMonitor
JellyBean
Juggler
ChangeReporter
TickTock
Voter
Molecule
QuoteMonitor
JDBC SELECT
SorterBean
BridgeTester
264
press
260
262

FIG. 6B

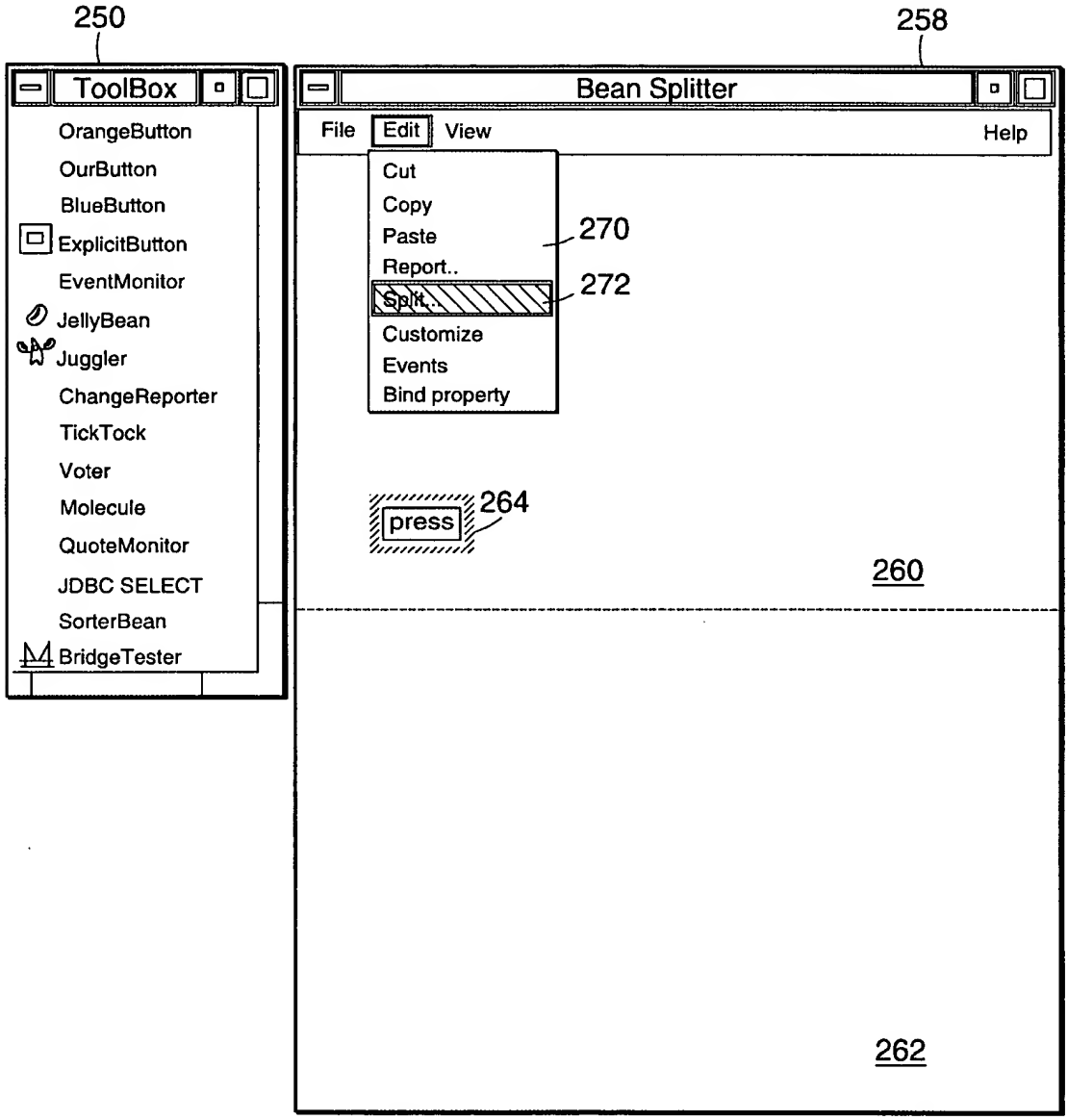
250
258
ToolBox
OrangeButton
OurButton
BlueButton
ExplicitButton
EventMonitor
JellyBean
Juggler
ChangeReporter
TickTock
Voter
Molecule
QuoteMonitor
JDBC SELECT
SorterBean
BridgeTester
Bean Splitter
File
Edit
View
Help
Cut
Copy
Paste
Report..
Split..
Customize
Events
Bind property
270
272
press
264
260
262

FIG. 6C

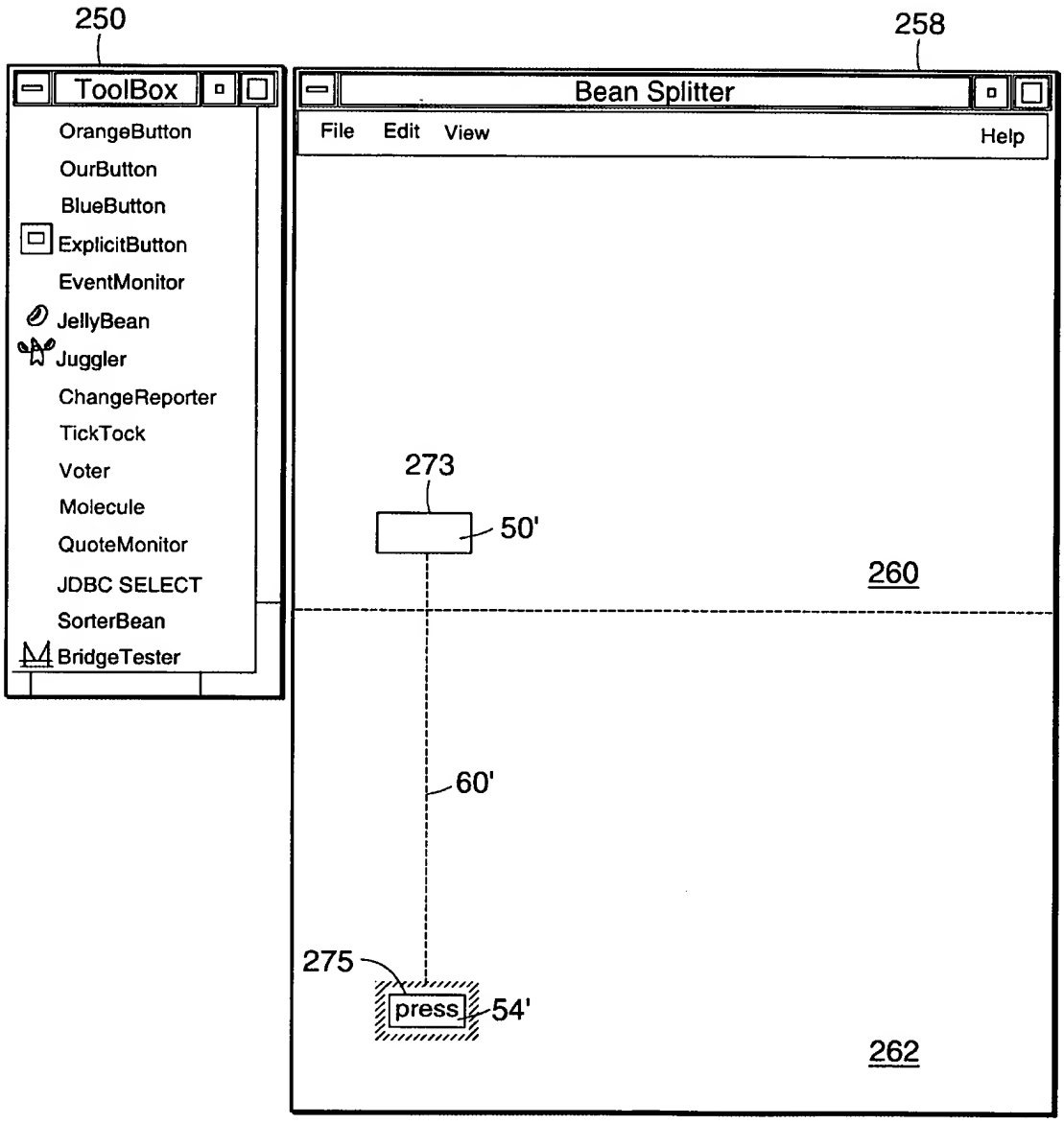
250
258
ToolBox
OrangeButton
OurButton
BlueButton
ExplicitButton
EventMonitor
JellyBean
Juggler
ChangeReporter
TickTock
Voter
Molecule
QuoteMonitor
JDBC SELECT
SorterBean
BridgeTester
Bean Splitter
File
Edit
View
Help
273
50'
260
60'
275
press
54'
262

FIG. 6D

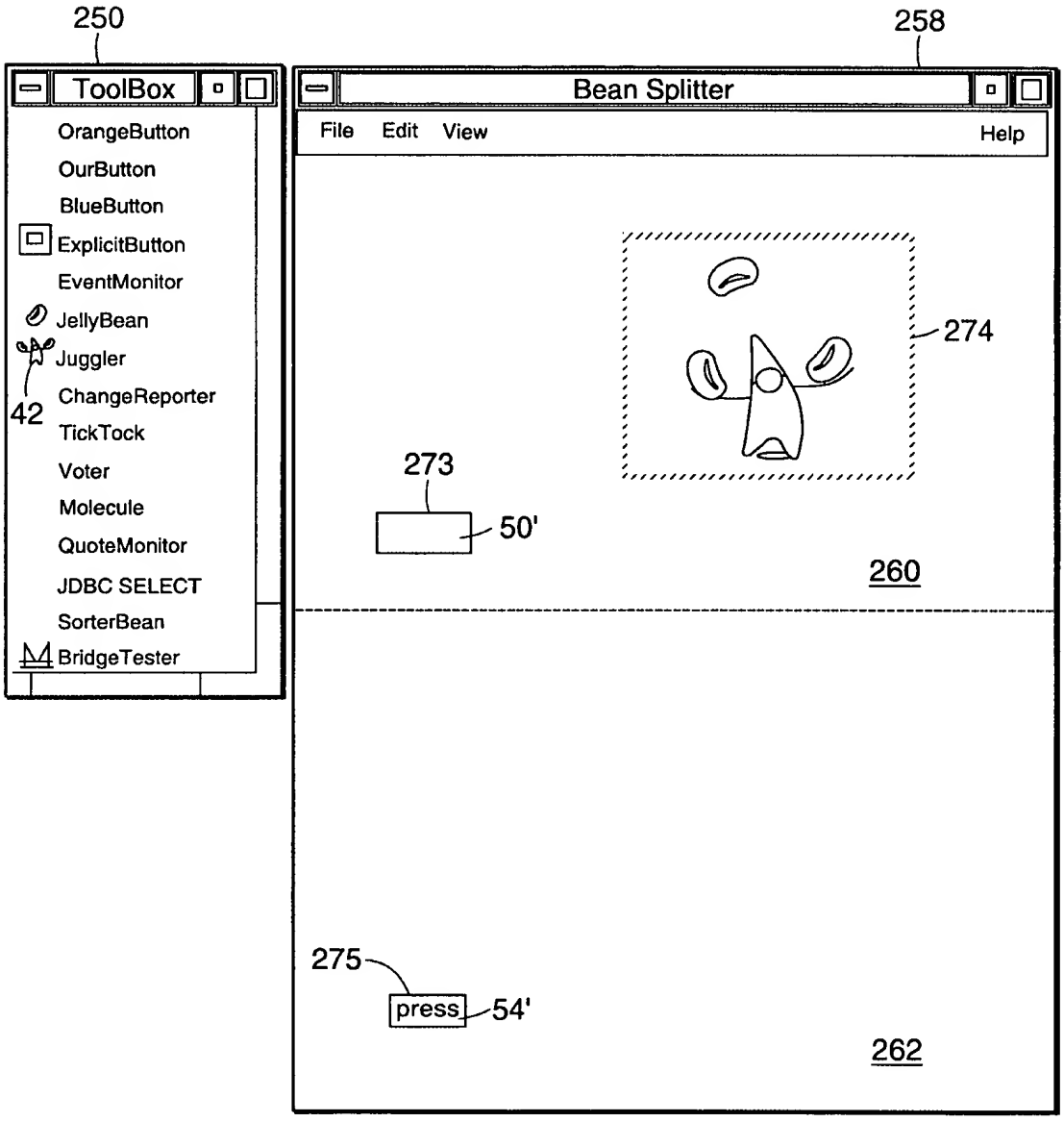
250
258
ToolBox
OrangeButton
OurButton
BlueButton
ExplicitButton
EventMonitor
JellyBean
Juggler
ChangeReporter
TickTock
Voter
Molecule
QuoteMonitor
JDBC SELECT
SorterBean
BridgeTester
42
Bean Splitter
File
Edit
View
Help
274
273
50'
260
275
press
54'
262

FIG. 6E

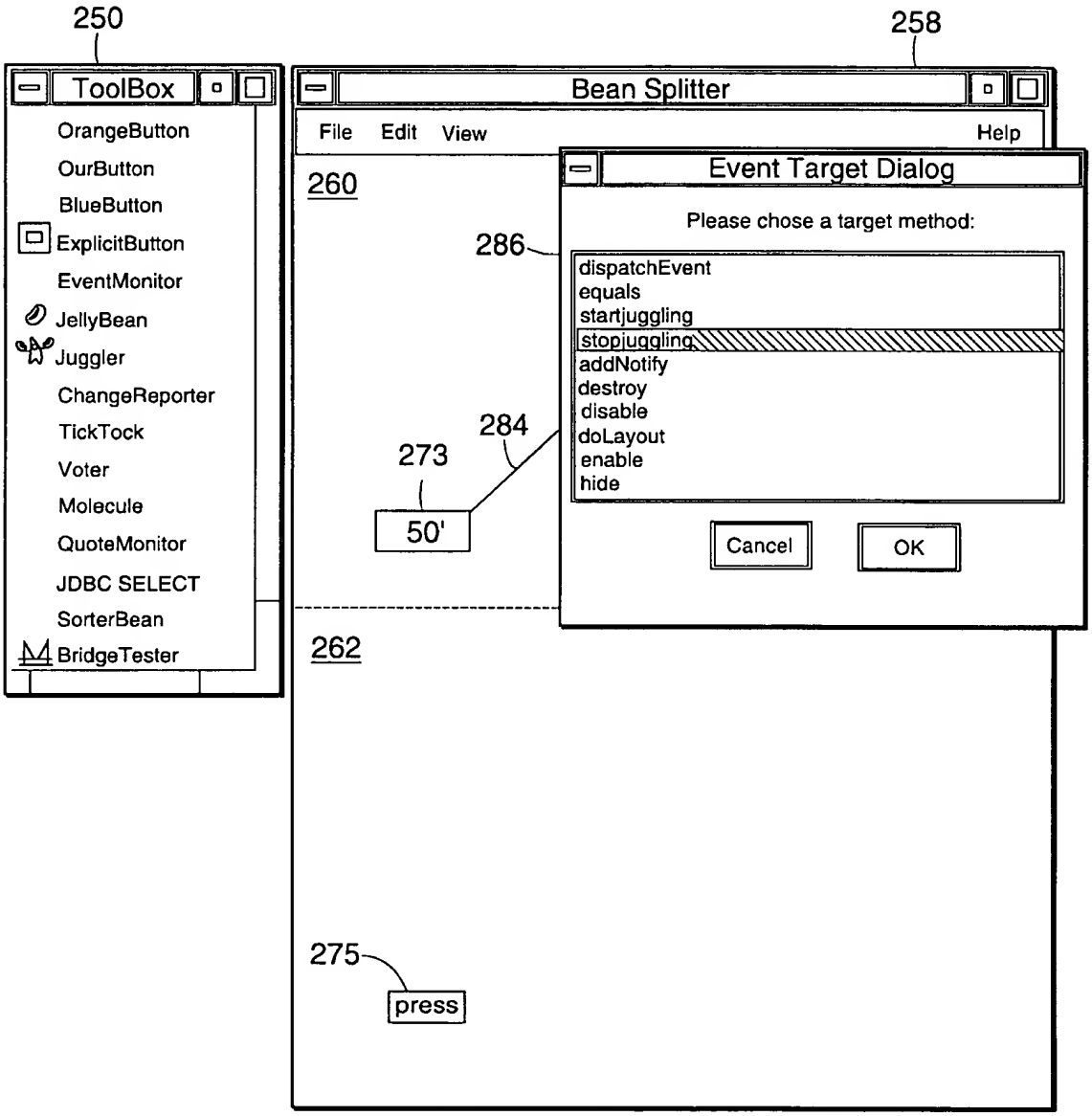
250
258
ToolBox
OrangeButton
OurButton
BlueButton
ExplicitButton
EventMonitor
JellyBean
Juggler
ChangeReporter
TickTock
Voter
Molecule
QuoteMonitor
JDBC SELECT
SorterBean
BridgeTester
Bean Splitter
File
Edit
View
Help
260
Event Target Dialog
Please chose a target method:
286
dispatchEvent
equals
startjuggling
stopjuggling
addNotify
destroy
disable
doLayout
enable
hide
284
273
50'
Cancel
OK
262
275
press

FIG. 6H

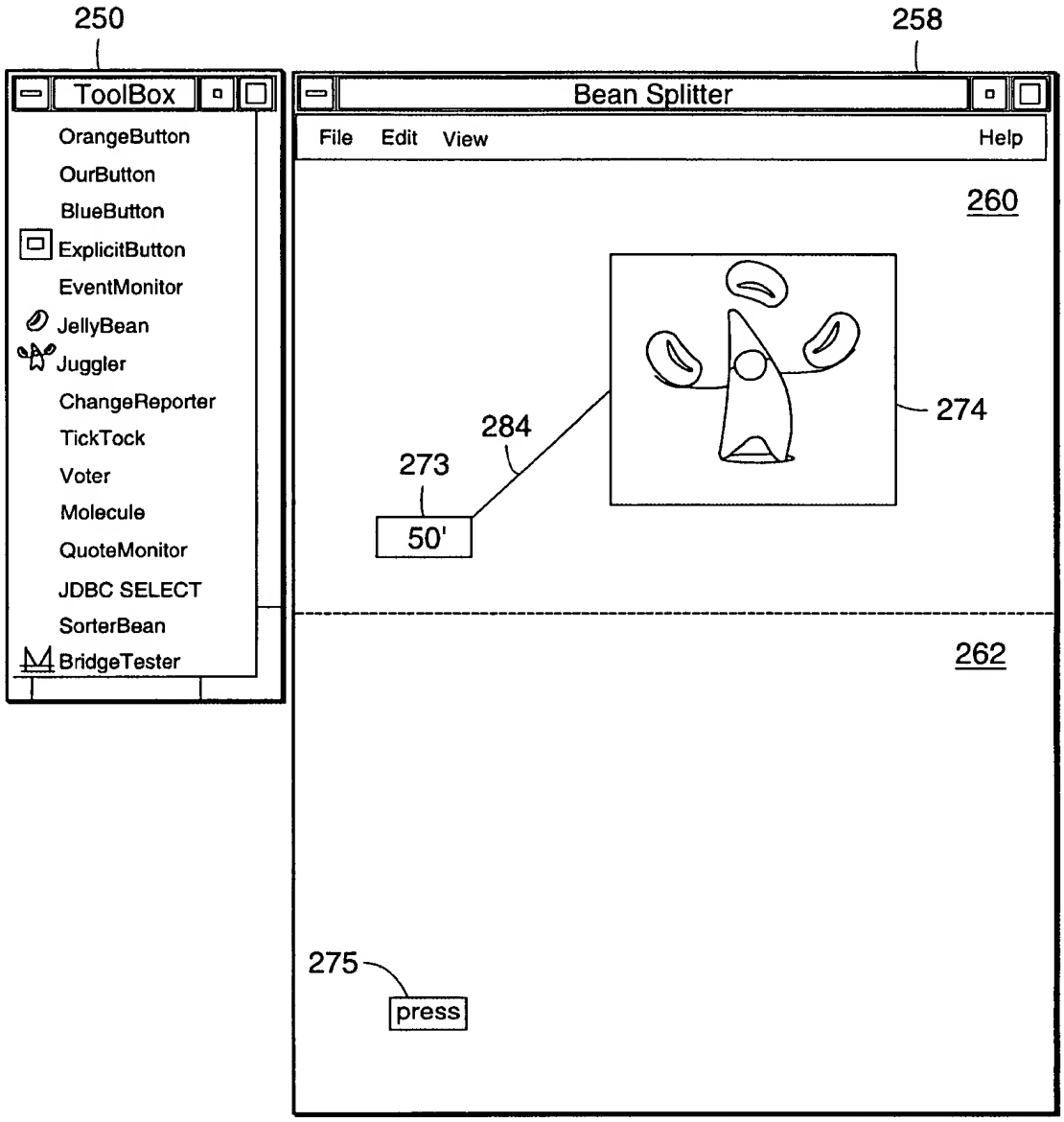
250
258
ToolBox
OrangeButton
OurButton
BlueButton
ExplicitButton
EventMonitor
JellyBean
Juggler
ChangeReporter
TickTock
Voter
Molecule
QuoteMonitor
JDBC SELECT
SorterBean
BridgeTester
Bean Splitter
File
Edit
View
Help
260
274
284
273
50'
262
275
press

FIG. 6G

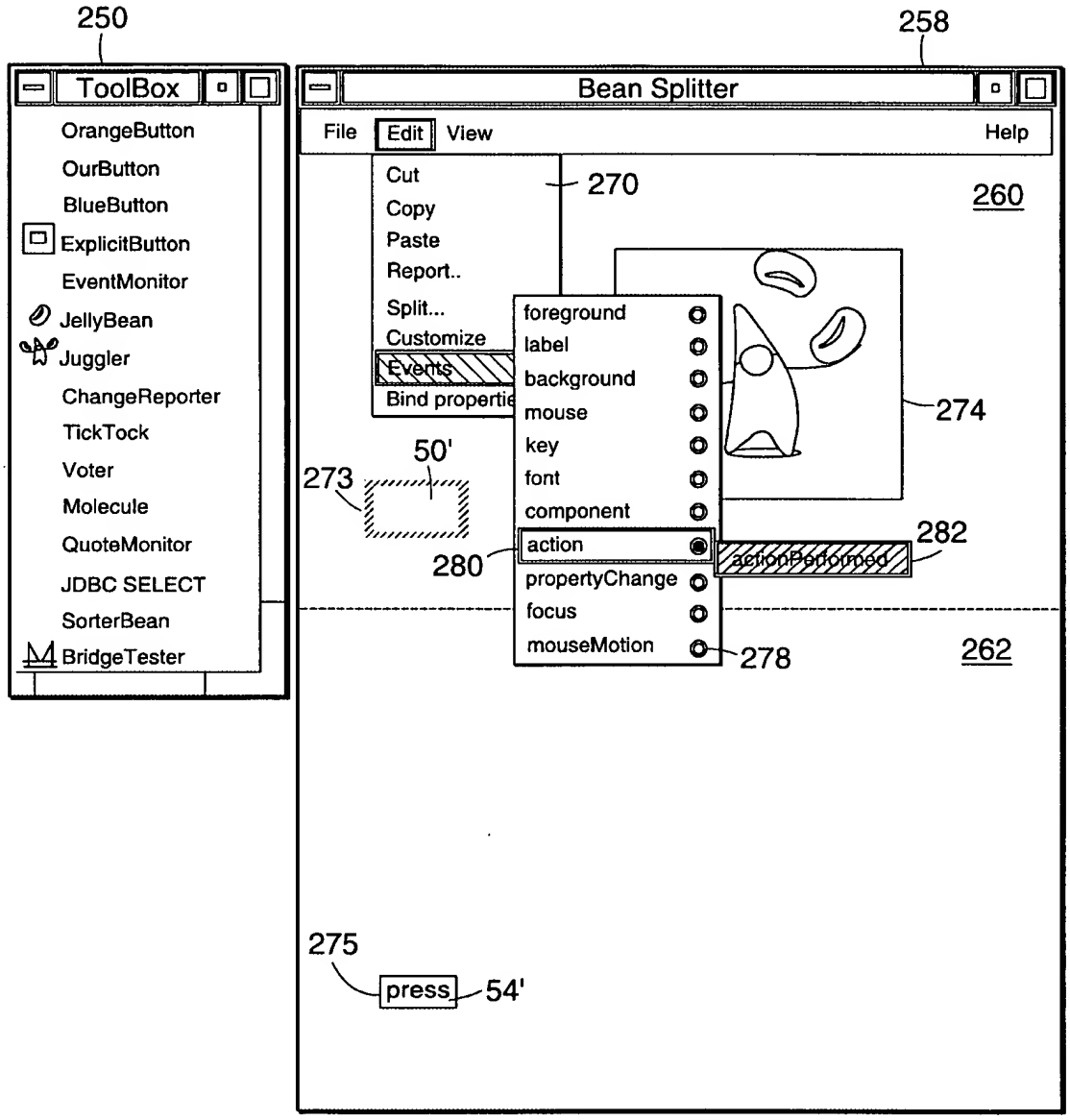
250
258
ToolBox
OrangeButton
OurButton
BlueButton
ExplicitButton
EventMonitor
JellyBean
Juggler
ChangeReporter
TickTock
Voter
Molecule
QuoteMonitor
JDBC SELECT
SorterBean
BridgeTester
Bean Splitter
File
Edit
View
Help
Cut
Copy
Paste
Report..
Split...
Customize
Events
Bind properties
270
260
foreground
label
background
mouse
key
font
component
action
propertyChange
focus
mouseMotion
actionPerformed
274
282
278
50'
273
280
262
275
press
54'

FIG. 6F

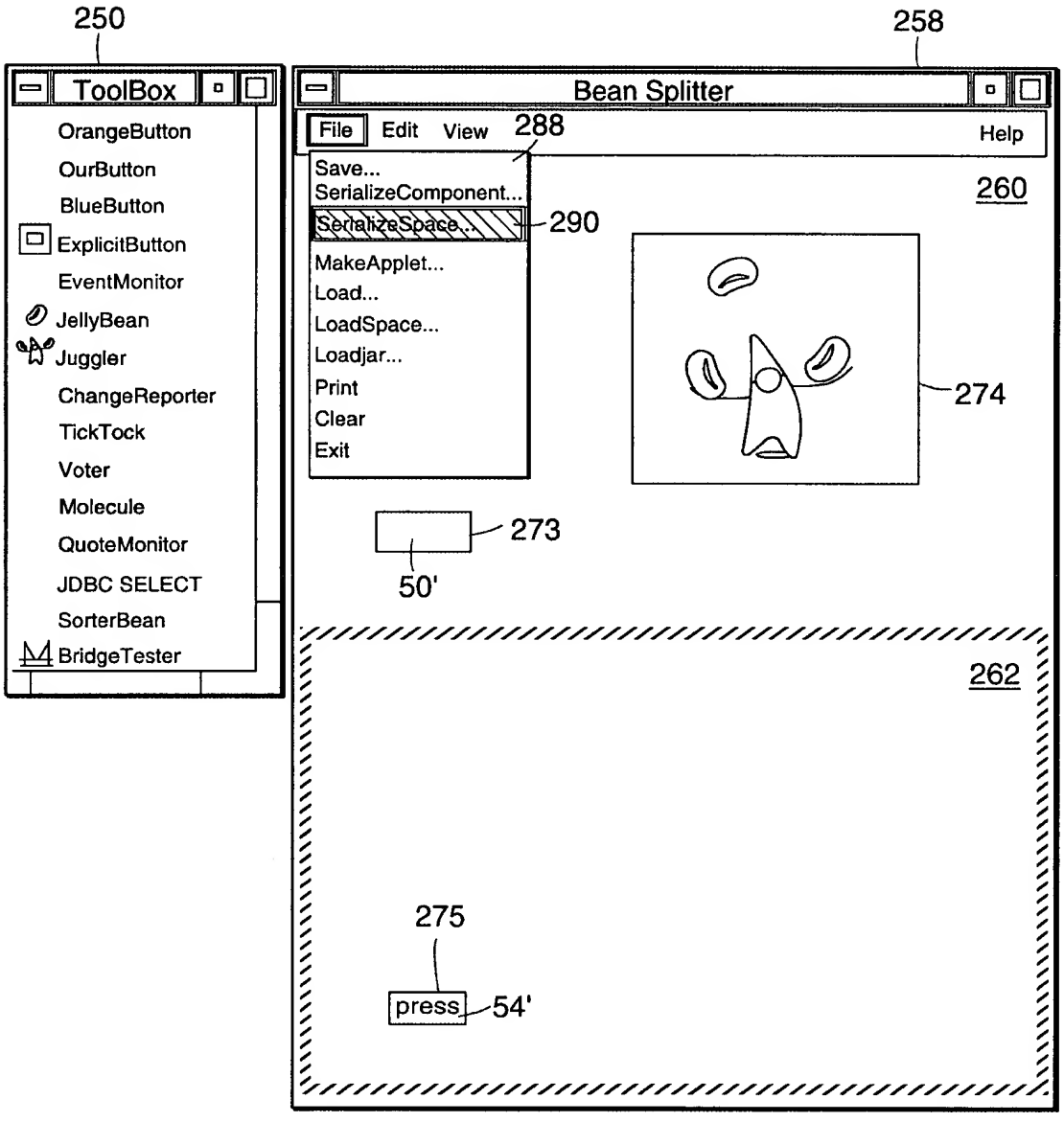
250
258
ToolBox
OrangeButton
OurButton
BlueButton
ExplicitButton
EventMonitor
JellyBean
Juggler
ChangeReporter
TickTock
Voter
Molecule
QuoteMonitor
JDBC SELECT
SorterBean
BridgeTester
Bean Splitter
File
Edit
View
Help
288
Save...
SerializeComponent...
SerializeSpace...
290
MakeApplet...
Load...
LoadSpace...
Loadjar...
Print
Clear
Exit
260
274
273
50'
262
275
press
54'

FIG. 6I

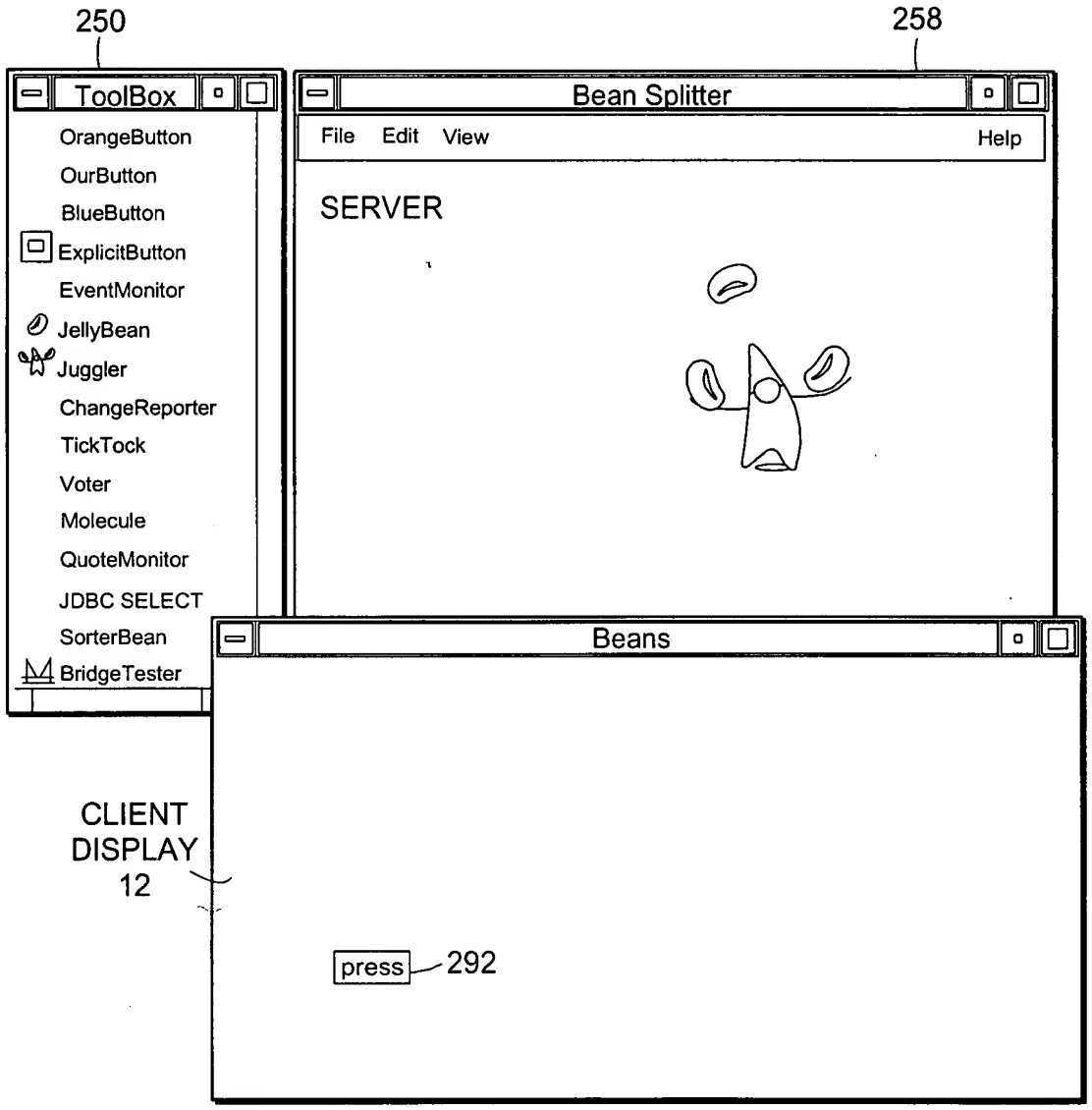
250
258
ToolBox
OrangeButton
OurButton
BlueButton
ExplicitButton
EventMonitor
JellyBean
Juggler
ChangeReporter
TickTock
Voter
Molecule
QuoteMonitor
JDBC SELECT
SorterBean
BridgeTester
Bean Splitter
File Edit View Help
SERVER
Beans
CLIENT DISPLAY 12
press
292

FIG. 6J